

## CLAIMS

What is claimed is:

1. A method for determining uplink power requirements for a transceiver in a wireless communication system, comprising the steps of:
  - obtaining first measurements from a beacon signal occupying a first timeslot in a frame;
  - obtaining second measurements from at least one additional channel having a known transmitted signal strength and occupying a second timeslot in the frame; and
  - utilizing said first and second measurements to determine a path loss estimate.
2. The method of claim 1 further comprising the step of:
  - utilizing said path loss estimate to determine transmission power.
3. The method of claim 1, further comprising the step of:
  - utilizing said path loss to control transmitting power in a subsequent timeslot in the frame.
4. The method of claim 1, further comprising the steps of:
  - obtaining further measurements from a timeslot in the frame different from the first and second timeslots; and
  - utilizing the measurements from the first and second timeslots, and the further measurements to obtain a further path loss estimate.
5. The method of claim 1 wherein the beacon signal and the additional channel are transmitted utilizing one of time division duplex and time division synchronous code multiple access.

6. The method of claim 1, wherein the steps for obtaining the measurements include obtaining a received signal code power measurement.

7. A method for use in determining uplink power requirements for a transceiver in a wireless system having timeslot separation between uplink and downlink timeslots in wireless communication system which includes at least one base station and at least one receiver, the method comprising the steps of:

- transmitting a beacon channel;
- transmitting a power offset value between the beacon channel and a physical channel;
- obtaining received signal code power (RSCP) measurements of the beacon channel and the physical channel;
- obtaining said power offset value; and
- determining a path loss based on the RSCP measurements and the power offset value.

8. The method of claim 7 further comprising the step of:  
employing the path loss for use in an uplink timeslot.

9. The method of claim 7 wherein the path loss is determined by subtracting the RSCP of the beacon channel from the transmission power of the beacon channel.

10. The method of claim 7 wherein the transmit power of the physical channel is constant.

11. Apparatus for determining uplink power requirements for a transceiver in a wireless communication system, comprising:

first means for obtaining measurements from a beacon signal occupying a given timeslot in a frame;

second means for obtaining measurements from at least one physical channel occupying another timeslot in said frame; and

third means responsive to the measurements obtained by the first and second means for determining a path loss measurement.

12. The apparatus of claim 11, further comprising fourth means for utilizing the results obtained from said third means in an uplink timeslot.

13. The apparatus of claim 11, further comprising fourth means for utilizing said path loss measurement to control transmitting power in an uplink timeslot in the frame.

14. Apparatus for determining uplink power requirements for a transceiver in a wireless system having timeslot separation between uplink and downlink timeslots in a wireless communication system, comprising:

a base station, having a circuit for transmitting a beacon channel, an additional channel and a power offset value for the additional channel; and

a receiver, for receiving said beacon channel, additional channel and power offset value and having:

a measurement circuit for obtaining the received power (RSCP) of the beacon channel and the additional channel; and

a circuit for determining a path loss responsive to the RSCP measurements and the power offset value.

15. Apparatus for determining uplink power requirements for a transceiver in a wireless system having timeslot separation between uplink and downlink timeslots in a wireless communication system, comprising:

a base station, having a circuit for transmitting a beacon channel and an additional channel at known transmission power levels; and

a receiver, having a measurement circuit for measuring the received the power of the known channel and the additional channel, and a circuit for calculating the path loss based upon said measured values and said transmission power levels.

16. The apparatus of claim 15, further comprising a circuit for employing the path loss to control signal power in an uplink timeslot.

17. A wireless transmit/receive unit (WTRU) for use in slotted communications, the WTRU comprising:

a circuit for receiving a beacon channel and an additional channel of known value;

a path loss measurement circuit for obtaining a path loss measurement of the beacon channel and a path loss measurement of the additional channel of known value; and

a circuit for providing a transmitted power adjustment in accordance with the path loss measurements.

18. A method for determining uplink power requirements for a transceiver in a wireless communication system, comprising the steps of:

obtaining measurements from a beacon signal occupying a given timeslot in a frame;

obtaining measurements from at least one physical channel occupying another timeslot in the frame; and

utilizing the measurements obtained from the beacon signal and the physical channel to determine a path loss measurement

19. The method of claim 18, further comprising the step of:  
utilizing the pass loss measurement in an uplink timeslot.
20. The method of claim 18, further comprising the utilizing said path loss measurement to control transmitting power in an uplink timeslot in the frame.
21. The method of claim 18, further comprising the steps of:  
obtaining further measurements from a signal occupying a different timeslot from the beacon signal and the physical channel in the frame; and  
utilizing the measurements obtained from the beacon timeslot, the physical channel timeslot, and the further measurement to determine a path loss estimate.